

PATENT COOPERATION TREATY

PCT

NOTIFICATION OF ELECTION

(PCT Rule 61.2)

From the INTERNATIONAL BUREAU

To:

United States Patent and Trademark
Office
(Box PCT)
Crystal Plaza 2
Washington, DC 20231
ÉTATS-UNIS D'AMÉRIQUE

in its capacity as elected Office

Date of mailing (day/month/year) 08 January 1999 (08.01.99)	
International application No. PCT/US97/17037	Applicant's or agent's file reference RCA 88469
International filing date (day/month/year) 23 September 1997 (23.09.97)	Priority date (day/month/year) 14 April 1997 (14.04.97)
Applicant HAILEY, James, Edwin et al	

1. The designated Office is hereby notified of its election made:

☒ in the demand filed with the International Preliminary Examining Authority on:

06 November 1998 (06.11.98)

☐ in a notice effecting later election filed with the International Bureau on:

2. The election ☒ was

☐ was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

The International Bureau of WIPO
34, chemin des Colombettes
1211 Geneva 20, Switzerland

Facsimile No.: (41-22) 740.14.35

Authorized officer

P. Regis

Telephone No.: (41-22) 338.83.38

PATENT COOPERATION TREATY

From the INTERNATIONAL BUREAU

PCT

NOTIFICATION OF CORRECTION, CANCELLATION OR WITHDRAWAL OF PRIORITY CLAIM

(PCT Rules 4.10(d) and 90bis.3 and
Administrative Instructions, Sections 402(c) and (d)
and 415(a) and (b))

To:

TRIPOLI, Joseph, S.
GE and RCA Licensing Management
Operation, Inc.
P.O. Box 5312
Princeton, NJ 08543
ETATS-UNIS D'AMERIQUE

Date of mailing (<i>day/month/year</i>) 19 January 1998 (19.01.1998)	
Applicant's or agent's file reference RCA 88469	IMPORTANT NOTIFICATION
International application No. PCT/US97/17037	International filing date (<i>day/month/year</i>) 23 September 1997 (23.09.1997)
Applicant THOMSON CONSUMER ELECTRONICS, INC.	

The applicant is hereby notified that the International Bureau has taken the following action in respect of the priority claim made in the international application.

1. In accordance with the applicant's request:

- ☒ the filing date of the earlier application the priority of which is claimed has been corrected to indicate the following date: 14 April 1997 (14.04.1997)
- ☐ the priority claim has been cancelled.

2. ☐ The priority claim has been cancelled *ex officio*.

3. ☐ The priority claim has been withdrawn by a notice received from the applicant on

☒ In the case where multiple priorities have been claimed, the above action relates to the following particular priority claim(s):

"US 14.4.1997 60/043,539 "

A copy of this notification has been sent to the receiving Office and to

- ☒ the International Searching Authority (where the international search report has not yet been issued)
- ☒ the designated Offices (which have already been notified of the receipt of the record copy)
- ☐ the International Preliminary Examining Authority

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland	Authorized officer <p style="text-align: center;">P.Regis</p>
Facsimile No. (41-22) 740.14.35	Telephone No. (41-22) 338.83.38

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference RCA 88469	FOR FURTHER ACTION see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. PCT/US 97/17037	International filing date (day/month/year) 23/09/1997	(Earliest) Priority Date (day/month/year) 14/04/1997
Applicant THOMSON CONSUMER ELECTRONICS, INC. et al.		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 4 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

1. ☐ Certain claims were found unsearchable (see Box I).
2. ☐ Unity of invention is lacking (see Box II).
3. ☐ The international application contains disclosure of a **nucleotide and/or amino acid sequence listing** and the international search was carried out on the basis of the sequence listing
 - ☐ filed with the international application.
 - ☐ furnished by the applicant separately from the international application.
 - ☐ but not accompanied by a statement to the effect that it did not include matter going beyond the disclosure in the international application as filed.
 - ☐ Transcribed by this Authority
4. With regard to the **title**,
 - ☒ the text is approved as submitted by the applicant
 - ☐ the text has been established by this Authority to read as follows:
5. With regard to the **abstract**,
 - ☒ the text is approved as submitted by the applicant
 - ☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this International Search Report, submit comments to this Authority.
6. The figure of the **drawings** to be published with the abstract is:
Figure No. 6
 - ☒ as suggested by the applicant. ☐ None of the figures.
 - ☐ because the applicant failed to suggest a figure.
 - ☐ because this figure better characterizes the invention.

INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 97/17037

A. CLASSIFICATION OF SUBJECT MATTER
IPC 6 H04N7/173 H04N5/44

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 6 H04N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 97 13368 A (STARSIGHT TELECAST INCORPORATED) 10 April 1997 see the whole document ---	1-18
X	PROFFIT B.: "INTERCAST BRINGS THE WEB TO TV" PC MAGAZINE, 21 January 1997, pages 203-204, XP002053914 see the whole document ---	1,3,11, 16
Y	US 5 589 892 A (KNEE R.) 31 December 1996 see column 27, line 22 - line 43 see column 33, line 8 - column 34, line 12 see column 36, line 63 - column 39, line 3 see column 40, line 10 - column 41, line 33 --- -/--	1-18



Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search

2 February 1998

Date of mailing of the international search report

13/03/1998

Name and mailing address of the ISA

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Authorized officer

Verscheiden, J

INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 97/17037

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	WO 95 33338 A (BELL ATLANTIC NETWORK SERVICES INC.) 7 December 1995 see page 6, line 27 - page 36, line 35 ---	1-18
A	US 5 481 542 A (LOGSTON G. ET AL) 2 January 1996 see the whole document ---	1-18
A	US 5 583 864 A (LIGHTFOOT R. ET AL) 10 December 1996 see column 7, line 13 - column 25, line 61 ---	1-18
A	WO 97 09827 A (NEC AUSTRALIA PTY. LTD.) 13 March 1997 see page 6, line 17 - page 20, line 15 see page 26, line 13 - page 27, line 27 ---	1-18
A	US 5 617 565 A (AUGENBRAUN J. ET AL) 1 April 1997 see column 8, line 39 - column 9, line 5 see column 14, line 1 - column 15, line 44 see column 16, line 13 - line 17 ---	1-3,11, 16
A	WO 96 26493 A (DIGITAL INTERACTIVE SYSTEMS CORPORATION LTD.) 29 August 1996 see the whole document ---	1-4,10, 17
A	WO 96 38002 A (BELLSOUTH CORPORATION) 28 November 1996 see the whole document ---	1-4,10, 17
A	WO 97 11558 A (FRIDLEY TECHNOLOGIES LTD) 27 March 1997 see the whole document ---	1,3
A	WO 96 33572 A (STARSIGHT TELECAST INCORPORATED) 24 October 1996 see page 2, line 9 - page 5, line 19 ---	1-18
A	EP 0 746 119 A (MITSUBISHI DENKI KABUSHIKI KAISHA) 4 December 1996 see column 45, line 6 - line 27 see column 41, line 38 - line 45 ---	1-18
P,X	WO 97 28499 A (AWARD SOFTWARE INTERNATIONAL INC.) 7 August 1997 see the whole document ---	1,10,11, 16,17
E	WO 97 41690 A (AWARD SOFTWARE INTERNATIONAL INC.) 6 November 1997 see the whole document ---	1,10,11, 16,17
5 5 E	EP 0 811 940 A (WEBTV NETWORKS INC) 10 December 1997 see the whole document ---	1,10,11, 16,17
-/--		

INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 97/17037

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
E	<p>EP 0 811 939 A (WEBTV NETWORKS INC.) 10 December 1997 see the whole document -----</p>	<p>1,10,11, 16,17</p>

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US 97/17037

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 9713368 A	10-04-97	AU 7387196 A	28-04-97
US 5589892 A	31-12-96	AU 6258596 A	30-12-96
		WO 9641478 A	19-12-96
		AU 5572996 A	18-11-96
		WO 9634491 A	31-10-96
		US 5585866 A	17-12-96
WO 9533338 A	07-12-95	US 5635979 A	03-06-97
		AU 2657995 A	21-12-95
		US 5666293 A	09-09-97
US 5481542 A	02-01-96	AU 1087095 A	29-05-95
		BR 9408030 A	17-12-96
		CA 2176131 A	18-05-95
		CN 1134771 A	30-10-96
		EP 0728398 A	28-08-96
		JP 9505186 T	20-05-97
		WO 9513681 A	18-05-95
US 5583864 A	10-12-96	NONE	
WO 9709827 A	13-03-97	AU 6782896 A	27-03-97
US 5617565 A	01-04-97	NONE	
WO 9626493 A	29-08-96	AU 5699796 A	11-09-96
WO 9638002 A	28-11-96	AU 5928596 A	11-12-96
WO 9711558 A	27-03-97	NONE	
WO 9633572 A	24-10-96	US 5550576 A	27-08-96
		AU 5443996 A	07-11-96
		US 5684525 A	04-11-97
EP 746119 A	04-12-96	JP 9051297 A	18-02-97
WO 9728499 A	07-08-97	NONE	

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US 97/17037

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 9741690 A	06-11-97	NONE	
EP 0811940 A	10-12-97	WO 9747143 A	11-12-97
EP 0811939 A	10-12-97	WO 9746943 A	11-12-97

presented by the need to devise a User interface for such a system that supports complex User interactive tasks whilst providing a simple command interface suitable for the general public. A PC/TV system User interface, for example, should allow a User to
5 view a selected program and permit User operation of functions such as Email, telephone, Internet access, fax and video-phone functions. Such applications require communication between a PC/TV unit and a variety of both remote sources e.g. a satellite service provider, and local sources e.g. a DVD storage device.
10 Further, a PC/TV needs to process and decode data in different data formats from different devices and display received data to the User. These problems are addressed by a system according to the present invention.

15

Summary of the Invention

The inventors have hereby recognized that a Program Guide type of User interface advantageously provides a simple, easy to use interface for User operation of functions such as Email,
20 telephone, Internet access, fax, home control, and video-phone functions. The use of a Program Guide for such functions also advantageously provides a single User interface for User operation of multiple devices and associated functions.

The inventors have further recognized that it is
25 desirable for a video decoder system to be capable of automatically acquiring program guide information from local and remote peripheral devices to form a composite program guide. A video decoder automatically acquires program guide information describing the program content available from peripheral devices
30 such as a DVD device or server. The composite program guide includes communication protocols and access data involved in data transfer between a PC/TV unit and a variety of both local and remote peripheral devices, for example.

In a method for forming a composite program guide
35 from information available from a plurality of sources, program guide information is received from a first source. Access data is

3 1

CLAIMS

1. In a video decoder system for receiving program guide information from a first source, a method for forming a
5 composite program guide for program content available from a plurality of sources, comprising the steps of:
- a) retrieving access data from memory;
 - b) initiating communication automatically between
said decoder and a second source external to said video decoder
10 using said access data;
 - c) retrieving program guide information from said
second source; and
 - d) incorporating said program guide information
provided by said first and second sources into a program guide for
15 display.
2. A method according to claim 1 wherein, in step (b)
said communication is initiated on a repetitive basis in
response to preprogrammed instructions of a processor.
20
3. A method according to claim 1 wherein, in step (b)
said communication is initiated in response to a User
command via a program guide menu selection.
- 25 4. A method according to claim 1 wherein, in step (b)
said communication is initiated in response to at least
one of: a) power-up of said decoder, and b) power-up of an
attached peripheral device.

5. A method according to claim 1 further including the step of detecting a change in number or type of peripheral devices connected to said decoder.

5

6. A method according to claim 5 wherein in step (b) said communication is initiated in response to said change.

10

7. A method according to claim 5 wherein said step of initiating communication is performed on a repetitive basis in response to preprogrammed processor instruction for said detecting of said change.

15

8. A method according to claim 5 wherein said change is detected in response to configuration data identifying a peripheral device attached to said decoder and provided from one of: a) User data entry, and b) said received program guide information.

20

9. A method according to claim 1 wherein said step of initiating communication is performed in response to pre-stored configuration data identifying a peripheral device attached to said decoder.

25

10. A method according to claim 1 wherein said first source is one of a) a satellite broadcast source, b) a terrestrial broadcast source, and c) a cable broadcast source, and

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said second source is one of a) a storage source, b) an Internet source, c) a computer network source, and d) a source accessible via telephone lines.

11. In a video decoder system for receiving program guide information from a first source, a method for forming a program guide for program content available from a plurality of sources, comprising the steps of:

- 5 a) retrieving access data from memory;
 b) identifying a peripheral device attached to said decoder;
 c) initiating communication between said decoder and said peripheral device attached to said decoder using a
10 communication protocol determined from said access data;
 d) retrieving program guide information from said peripheral device; and
 e) incorporating said program guide information provided by said first source and peripheral device into a program
15 guide for display.

12. A method according to claim 11 wherein, in step (b)

20 said peripheral device is identified from configuration information derived from one of: a) pre-stored data in internal memory of said decoder, b) data entered by a User, and c) said program guide information received from said first source.

13. A method according to claim 11 further including
25 the step of

 polling via a decoder communication link to determine whether said peripheral device is attached to said decoder link.

14. A method according to claim 11 further including
30 the step of

 identifying a change in number or type of peripheral devices connected to said decoder.

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15. A method according to claim 14 wherein in step (c) said communication is initiated in response to said change.

5 16. A method according to claim 11 wherein said peripheral device is one of a) a storage device, b) a device accessed via the Internet, c) a satellite, terrestrial or cable broadcasting device, d) a device accessible via a computer network and e) a device accessible via telephone lines.

10

17. In a video decoder system for receiving program guide information from a first source, a method for forming a program guide for program content available from a plurality of sources, comprising the steps of:

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a) retrieving access data from memory;

b) automatically initiating communication between said decoder and a peripheral device attached to said decoder in response to at least one of the following conditions: i) power-up of said decoder, ii) power-up of said attached peripheral device, iii) repetitive pre-programmed command from a decoder processor, iv) change in number of attached peripheral devices, and v) change in type of attached peripheral devices;

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c) retrieving program guide information from said peripheral device; and

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d) incorporating said program guide information provided by said first source and peripheral device into a program guide for display.

18. A method according to claim 17 wherein, in step (b)

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said communication is initiated using a communication protocol determined from said access data.

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PATENT COOPERATION TREATY

PCT

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REC'D 20 JUL 1999

WIPO PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference RCA 88469	See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416) FOR FURTHER ACTION	
International application No. PCT/US97/17037	International filing date (day/month/year) 23/09/1997	Priority date (day/month/year) 14/04/1997
International Patent Classification (IPC) or national classification and IPC H04N7/173		
Applicant THOMSON CONSUMER ELECTRONICS, INC. et al.		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.



2. This REPORT consists of a total of 5 sheets, including this cover sheet.

- ☒ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 7 sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☒ Certain documents cited
- VII ☒ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand 06/11/1998	Date of completion of this report 16.07.99
Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. (+49-89) 2399-0 Tx: 523656 epmu d Fax: (+49-89) 2399-4465	Authorized officer Noll, B Telephone No. (+49-89) 2399 8700 

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/US97/17037

I. Basis of the report

1. This report has been drawn on the basis of (*substitute sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to the report since they do not contain amendments.*):

Description, pages:

1,3-30 as originally filed

2,2a as received on 19/03/1999 with letter of 16/03/1999

Claims, No.:

1-18 as received on 19/03/1999 with letter of 16/03/1999

Drawings, sheets:

1/9-9/9 as originally filed

2. The amendments have resulted in the cancellation of:

☐ the description, pages:

☐ the claims, Nos.:

☐ the drawings, sheets:

3. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

4. Additional observations, if necessary:

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. PCT/US97/17037

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes:	Claims	1-18
	No:	Claims	
Inventive step (IS)	Yes:	Claims	
	No:	Claims	1-18
Industrial applicability (IA)	Yes:	Claims	1-18
	No:	Claims	

2. Citations and explanations

see separate sheet

VI. Certain documents cited

1. Certain published documents (Rule 70.10)

and / or

2. Non-written disclosures (Rule 70.9)

see separate sheet

VII. Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

see separate sheet

To section V:

With regard to the method of claim 1 the document WO-A-97 13368 (hereinafter referred to as D1) discloses a method of acquiring program guide information from a first source such as satellite transmission or coax cable. Access data from a memory is retrieved which enables initiation of communication between the decoder and a second source such as the Internet in response to a user command (page 20, from line 19). Program guide information is also retrieved from the second source (claims 7 and 8), and a common program guide is generated for display to the user (figures 17A - 17C).

Initiation of communication to a second source upon a user's request is an appropriate solution in D1 since it is a priori not known which information from the second source is relevant for a particular user. Automatically downloading information items "in spec" would only waste transmission capacity since most of the information would be of no interest to a single user.

The situation is different in the present application. Here it is desired to download normal program guide information also from a second source. Program guide information is naturally of general interest for each tv viewer. It would be illogical for a skilled person if a user receives this information only on request. Instead, the skilled person would envisage that the decoding system automatically retrieves the information. Hence the subject-matter of claim 1 is not based on an inventive step.

The additional features of claims 2 and 4-9 are obvious to a skilled person, see for example in US-A-5 589 892 (column 11 from line 12). The feature of claims 3 and 10 are known from D1, see passages cited above.

Independent claim 11 differs from claim 1 in that a peripheral device is identified by the decoder before initiating communication with it. In D1 (page 20 from line 19) communication to a device via the Internet is automatically established if a user selects a particular item in the program guide in order to receive more information about a particular topic. Hence, on selection of the item, the Internet is identified as external device and communication to it is established. Furthermore, the same objections as to claim 1 also hold for claim 11 for the same reasons.

In claim 12, alternative a) to c) are known from D1, see passages cited above. In claim

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/US97/17037

16, alternative c) is known from D1. Claim 13 is an inherent feature of an Internet interface which determines whether the desired device (=address) is accessible or not. Claims 14 and 15 correspond to claims 5 and 6, respectively, see therefore objections raised above against claims 5 and 6.

Independent claim 17 contains the features of claims 1-5. Therefore, the objections against claims 1-5 also hold for claim 17 for the same reasons. The feature of claim 18 is implicitly known from D1, in which an Internet protocol has to be used to communicate with a device via the Internet.

To section VI:

The documents:

WO-A-97 28499 (filed 31.1.97; published 7.8.97; claimed priority 2.2.96),
WO-A-97 41690 (filed 1.5.97; published 6.11.97; claimed priority 2.5.96),
EP-A-0 811 940 (filed 29.4.97; published 10.12.97; claimed priority 3.6.96), and
EP-A-0 811 939 (filed 24.4.97; published 10.12.97; claimed priority 3.6.96)
are considered as relevant with the present claims. It should be mentioned that their priorities and that of the present application have not been checked.

To section VII:

Reference signs in parentheses should be inserted in the claims to increase their intelligibility, Rule 6.2(b) PCT. This applies to both the preamble and characterising portion.